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Re-evaluation Decision

RVD2016-05

d-Phenothrin

(publié aussi en français)

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Re-evaluation Decision

d-Phenothrin is a synthetic pyrethroid insecticide used to control a broad range of arthropod pests on a wide variety of sites, including in and around structures as well as indoor and outdoor ornamental plants. This insecticide is also used for flea and tick control.

After a re-evaluation of d-phenothrin, Health Canada's Pest Management Regulatory Agency (PMRA), under the authority of the *Pest Control Products Act* and Regulations, is granting continued registration of products containing d-phenothrin for sale and use in Canada. An evaluation of available scientific information found that products containing d-phenothrin do not present unacceptable risks to human health or the environment when used according to the revised label directions.

As a requirement of the continued registration of d-phenothrin, label amendments summarized below are required for all end-use products. No additional data are requested at this time. Appendix II lists all the required label amendments.

- Updated label statements to meet current labelling standards
- Additional precautionary statements to further protect the environment

The PMRA's pesticide re-evaluation program considers potential risks, as well as value, of pesticide products to ensure they meet modern standards established to protect human health and the environment. Regulatory Directive DIR2012-02, *Re-evaluation Program Cyclical Re-evaluation*, presents the details of the cyclical re-evaluation approach, which is in line with the requirements of the *Pest Control Products Act*.

This re-evaluation decision¹ was proposed in the consultation document Proposed Re-evaluation Decision PRVD2015-05, *d-Phenothrin*. Comments were received during the consultation process. The comments did not result in a change to risk assessments, and therefore this decision is consistent with the proposed re-evaluation decision stated in PRVD2015-05. Please refer to both the Overview and more detailed Science Evaluation of PRVD2015-05 for the human health, environmental and value considerations underlying this re-evaluation decision. A reference list for all data used as the basis for the re-evaluation decision is also included in PRVD2015-05.

Appendix I summarizes the comments and provides the PMRA's response to these comments. Appendix II and III list the required label amendments and the currently registered products containing d-phenothrin, respectively.

To comply with this decision, the required label amendments must be implemented on all product labels sold by registrants no later than 24 months after the publication date of this document. Registrants of products containing d-phenothrin will be informed of the specific requirements affecting their product registration(s) and of the regulatory options available to them.

¹ "Decision statement" as required by subsection 28(5) of the *Pest Control Products Act*.

Other Information

Any person may file a notice of objection² regarding this decision on d-phenothrin within 60 days from the date of publication of this Re-evaluation Decision. For more information regarding the basis for objecting (which must be based on scientific grounds), please refer to the Pesticides and Pest Management portion of Health Canada's website, Request a Reconsideration of Decision, or contact the PMRA's Pest Management Information Service.

² As per subsection 35(1) of the *Pest Control Products Act*

Appendix I Comments and Responses

In response to the consultation document PRVD2015-05, *d-Phenothrin*, comments related to toxicology were received from the registrant.

1.0 Comments Relating to Toxicology

Comment 1.1

In the original report on the 12-month dog dietary study (PRVD2015-05, p. 45), the occurrence of pituitary microcysts noted in females ingesting 7.1 mg/kg bw/day was considered not to be an adverse effect since it was judged to be an incidental finding. Based on this evaluation, the no-observed-adverse-effect level (NOAEL) of the 12-month dog dietary study was 8.2 mg/kg bw/day in males and 27 mg/kg bw/day in females, respectively. Therefore, the NOAEL in males (8.2 mg/kg bw/day) should be the acceptable daily intake (ADI).

PMRA Response

In the 12-month dietary dog study, a dose-response relationship was noted for the increased incidence of pituitary microcysts observed in 0/4, 0/4, 1/4 and 4/4 females at 0, 2.6, 7.1 and 27 mg/kg bw/day, respectively. Based on these numbers, the PMRA considered the increased incidence of pituitary microcysts in females to be treatment-related and adverse at 27 mg/kg bw/day. As such, the NOAEL established for this study was determined to be 7.1 mg/kg bw/day with a corresponding lowest-observed-adverse-effect level (LOAEL) of 27 mg/kg bw/day in females. Given these results, the effect levels for this study have not been adjusted and the ADI for d-phenothrin that was established by the PMRA will remain unchanged.

Comment 1.2

In the 104-week chronic toxicity/carcinogenicity study in mice (PRVD2015-05, p. 46), nodular hyperplasia of the liver of female mice observed at the dose of 450 mg/kg bw/day (3000 ppm) was not considered as a treatment-related lesion because there was no dose-relationship (incidence in the lifetime treatment group: 0/50, 4/50, 1/50 and 4/50 at control, 300, 1000 and 3000 ppm, respectively).

PMRA Response

The PMRA agrees that a dose-response relationship was not achieved for the increased incidence of nodular hyperplasia of the liver. However, the increased incidence noted at the high-dose level, as compared to the controls, occurred along with an increase in liver weight and increased hepatomegaly, a pattern that was demonstrated at the next lower dose level of 150 mg/kg bw/day in males. As such, this increased incidence of nodular hyperplasia of the liver was, therefore, considered by the PMRA to be a treatment-related effect and will still be included in this study summary for d-phenothrin.

Comment 1.3

In the 104-week chronic toxicity/carcinogenicity study in rats (PRVD2015-05, pp. 46-47), it should be specified that "the findings observed at 51/63 mg/kg bw/day were not considered adverse effects" because there was no statistically significant alteration in the original report.

PMRA Response

The PMRA agrees that the effects noted in the interim sacrificed animals at 51/63 mg/kg bw/day (♂/♀) were not considered adverse. These effects were considered to be adaptive and insufficient on their own to form an effect level for this study in the absence of any effects on body weight, organ weights or pathological findings or similar findings in the animals from the main part of the study. Therefore, the effects noted in the interim sacrifice animals at 51/63 mg/kg bw/day in ♂/♀ will be noted as non-adverse for d-phenothrin.

Comment 1.4

In the 2-generation dietary reproduction toxicity study (PRVD2015-05, pp. 47-48), the number of stillborn pups in F₁ had no dose-response or statistically significant increase in stillbirths (0, 4, 7, and 2 stillbirths at 0, 1000, 3000 and 10 000 ppm treatments, respectively). In addition, although number of stillborn pups apparently increased in the F₂, this increase was not statistically significant. Therefore, the increased number of stillborn pups was not considered to be a treatment-related change. The mean number of corpora lutea at 582/664 mg/kg bw/day that correlated with the decreased ovary size was considered to be the result of an overall decrease in body weight rather than of direct reproductive toxicity.

PMRA Response

In examining the original study (PMRA No. 1166309), the number of stillborn pups produced by the F₀ mothers (first generation) was 0/369, 4/316, 7/325 and 2/345 stillbirths at 0, 1000, 3000 and 10 000 ppm treatments, respectively, and was not considered treatment-related by the PMRA. The inclusion of this parameter at 582/664 mg/kg bw/day for the F₀ dams was a typographical error that will be amended. The number of stillborn pups produced by the F₁ mothers was reported as 5/301, 7/326, 8/365 and 13/306 stillbirths at 0, 1000, 3000 and 10 000 ppm treatments, respectively. In re-examining this data, the PMRA concurs that there is no treatment-related effect at the mid-dose level; however, the slight increase in stillborn pups at the high-dose, while not statistically significant, is still considered treatment-related. Accordingly, the PMRA will revise the reproductive NOAEL to 208 mg/kg bw/day. However, this does not result in any changes to the risk assessments.

A decreased number of corpora lutea was noted in females from the F₀ and F₁ generations at the high-dose level (mean number of corpora lutea in F₀ generation: 10.97 at high-dose level compared to 17.27 in controls; F₁ generation: 12.55 at high-dose level compared to 16.50 in controls). A statistically significant decrease in the absolute and relative ovarian weights was also noted at the high-dose level in both the F₀ and F₁ generations. Based on the overall weight of evidence, the decreased number of corpora lutea and decreased absolute and relative ovarian weights that were noted in two generations of animals are considered to be treatment-related and adverse by the PMRA. While a decrease in body weight may play a role in these effects, the degree to which it influences these parameters cannot be distinguished from possible treatment-

related effects. However, there is insufficient evidence to discount these findings at this time and as such, the PMRA will not revise the effect levels established for this parameter in the 2-generation dietary reproduction toxicity study in rats.

In conclusion, the above comments did not result in a change to risk assessments. Therefore, the proposed re-evaluation decision stated in PRVD2015-05 remains unchanged.

Appendix II Label Amendments for Products Containing d-Phenothrin

The label amendments presented below do not include all label requirements for individual end-use products, such as first-aid statements, disposal statements, precautionary statements and supplementary protective equipment. Information on labels of currently registered products should not be removed unless it contradicts the following label statements.

I) The following statements must be included under **DIRECTIONS FOR USE**.

For all products:

- "Keep foodstuff and food utensils out of room or covered during application and keep these off treated surfaces until treated area is vacuumed."

For all **dust** products registered for use indoors:

- "Application as broadcast, perimeter/spot, and crack and crevice is permitted."

For all **indoor aerosol** products, except space sprays and wasp/hornet nest sprays:

- "DO NOT apply as a broadcast application. ONLY perimeter/spot or crack and crevice is permitted. Perimeter/spot application is defined as an application in a wide band or strip around the perimeter of the room or over a small area ($< 2 \text{ ft}^2/0.2 \text{ m}^2$). Crack and crevice applications are defined as an application with the use of a pin stream nozzle, into cracks and crevices in which pests hide or through which they may enter a building. Application to upholstered furniture must be limited to tufts and seams or spot treatment."

For all products registered for use on **mattresses**:

- "Before treatment, remove all bedding and thoroughly vacuum and air out mattresses and box springs. Treat mattresses, box springs, bed frames, and headboards, especially tufts, folds and edges of the mattress. Allow treatment to dry before remaking bed with freshly washed bedding."

For all products registered for use on **plants**:

- "Not for use in greenhouses, vegetable gardens or on food-bearing plants."

II) The following statements must be included under **ENVIRONMENTAL HAZARDS**.

For all products:

- "Toxic to aquatic organisms."

For d-phenothrin products that are registered for outdoor use (not for products that are registered for indoor use only):

- Toxic to bees. Do not spray bees.

Appendix III Registered Products Containing d-Phenothrin as of 29 February 2016

Registration Number	Registrant	Product name	Marketing Class	Formulation Type	Guarantee (%)
29729	753146 AB Ltd. O/A Ultrasol Industries	Doktor Doom Sleep Tight - Fabrics and Upholstery Professional Strength Bed Bug Killer	Domestic	Pressurized product	0.12 ¹
30777	753146 AB Ltd. O/A Ultrasol Industries	Doktor Doom Wasp & Hornet Nest Annihilator	Domestic	Pressurized product	0.125 ¹
31335	753146 AB Ltd. O/A Ultrasol Industries	Doktor Doom Premium Quality #1 "No Wasps On Us" Wasp & Hornet Nest Killer Foam Spray	Domestic	Pressurized product	0.20 ¹
31336	753146 AB Ltd. O/A Ultrasol Industries	Doktor Doom Premium Quality #1 Bed Bug Killer Spray	Domestic	Pressurized product	0.20 ¹
31337	753146 AB Ltd. O/A Ultrasol Industries	Doktor Doom Professional, Premium Quality #1 Bed Bug Killer Spray	Domestic	Pressurized product	0.20 ¹
32170	753146 AB Ltd. O/A Ultrasol Industries	Doktor Doom Wasp & Hornet Nest Annihilator II	Domestic	Pressurized product	0.125 ¹
30781	9272-9771 Québec Inc.	Insect Stop Bed Bug Killer	Domestic	Pressurized product	0.20 ¹
31045	9272-9771 Québec Inc.	Insect Stop Wasp & Hornet Killer	Domestic	Pressurized product	0.125 ¹
31112	Acuity Holdings Inc.	Konk Hornet & Wasp Killer	Domestic	Pressurized product	0.125 ¹
32001	Acuity Holdings Inc.	Konk Hornet & Wasp Jet Foam	Domestic	Pressurized product	0.20 ¹
32002	Acuity Holdings Inc.	Konk Max Kill	Domestic	Pressurized product	0.20 ¹
29422	Agrium Advanced Technologies RP Inc.	Pro Aerosol Kills Bedbugs	Domestic	Pressurized product	0.12 ¹
30070	Alti Packaging Systems Inc.	Kablamo Bed Bug Killer	Domestic	Pressurized product	0.20 ¹
30706	Aura Pro Solutions Inc.	Zone Guard, Wasp & Hornet Blaster	Domestic	Pressurized product	0.125 ¹
30069	Brodi Specialty Products Ltd.	Brodi Bed Bug Killer	Domestic	Pressurized product	0.20 ¹
31057	Business Helpers' Depot Inc.	Fight Back Jet Foam Spray Stinging Insect Killer (TS)	Domestic	Pressurized product	0.20 ¹
31075	Business Helpers' Depot Inc.	Fight Back Flying & Crawling Insect Killer	Domestic	Pressurized product	0.20 ¹
31449	Business Helpers' Depot Inc.	Fight Back Bed Bug Killer	Domestic	Pressurized product	0.20 ¹
31570	Business Helpers' Depot Inc.	EZ-Kill Super Fast Stinging Insect Killer (TS)	Domestic	Pressurized product	0.125 ¹
31908	Business Helpers' Depot Inc.	Fight Back Houseplant Insect Killer	Domestic	Pressurized product	0.20 ¹
31912	Business Helpers' Depot Inc.	Fight Back Outdoor Mosquito and Fly Killer	Domestic	Pressurized product	0.20 ¹
30425	Cantol Corp.	Wasp & Hornet Spray	Commercial	Pressurized product	0.125 ¹
31937	Chem-Tech Ltd.	Prozap Crawling Insect Killer	Domestic	Pressurized product	0.20 ¹
31941	Chem-Tech Ltd.	Prozap Pet Guard IGR Flea Spray	Domestic	Pressurized product	0.30 ¹
30689	Conseal International, Inc.	Bed Bug Fix	Domestic	Pressurized product	0.20 ¹
27874	CRC Industries Inc.	CRC Bug Blast Wasp and Hornet Killer	Domestic	Pressurized product	0.125 ¹
31213	Croc Bloc Products Inc.	CROC Bloc Hornet and Wasp Spray	Domestic	Pressurized product	0.125 ¹

Registration Number	Registrant	Product name	Marketing Class	Formulation Type	Guarantee (%)
30285	DCG Vision Marketing & Sales International Ltd.	Power Shot Bed Bug Killer	Domestic	Pressurized product	0.20 ¹
31132	DCG Vision Marketing & Sales International Ltd.	Powershot Wasp & Hornet Killer Foam	Domestic	Pressurized product	0.20 ¹
31133	DCG Vision Marketing & Sales International Ltd.	Powershot Wasp & Hornet Killer	Domestic	Pressurized product	0.125 ¹
30306	Direct Line Sales & Supplies Corp.	Onguard T 20	Domestic	Pressurized product	0.125 ¹
31789	Direct Line Sales & Supplies Corp.	Onguard Hornet and Wasp Foam	Domestic	Pressurized product	0.20 ¹
30578	Eco-Cop Inc.	EZ-Kill Insecticide M-3-2	Domestic	Pressurized product	0.125 ¹
31313	Eliminate Brands Inc.	Eliminate Bed Bug Killer	Domestic	Pressurized product	0.20 ¹
31926	Empack Spraytech Inc.	Emzone Bed Bug Killer	Domestic	Pressurized product	0.20 ¹
31578	Federated Co-operatives Limited	Co-op Gold House & Home Insect Killer	Domestic	Pressurized product	0.20 ¹
25226	Hartz Canada Inc.	Hartz Ultraguard Flea & Tick Carpet Powder	Domestic	Powder	0.50 ¹
30728	Hartz Canada Inc.	Hartz Ultraguard Pro Flea & Tick Treatment for Dogs and Puppies Weighing 6 kg to 14 kg	Domestic	Solution	85.70 ¹
30729	Hartz Canada Inc.	Hartz Ultraguard Pro Flea & Tick Treatment for Dogs and Puppies Weighing 2.5 kg to 6 kg	Domestic	Solution	85.70 ¹
30730	Hartz Canada Inc.	Hartz Ultraguard Pro Flea & Tick Treatment for Dogs and Puppies Weighing 14 kg to 28 kg	Domestic	Solution	85.70 ¹
30731	Hartz Canada Inc.	Hartz Ultraguard Pro Flea & Tick Treatment for Dogs and Puppies Weighing Greater than 28 kg	Domestic	Solution	85.70 ¹
30732	Hartz Canada Inc.	Hartz Ultraguard Flea & Tick Treatment for Dogs and Puppies Weighing 2.5 kg to 6 kg	Domestic	Solution	85.70
30733	Hartz Canada Inc.	Hartz Ultraguard Flea & Tick Treatment for Dogs and Puppies Weighing 6 kg to 14 kg	Domestic	Solution	85.70
30734	Hartz Canada Inc.	Hartz Ultraguard Flea & Tick Treatment for Dogs and Puppies Weighing 14 kg to 28 kg	Domestic	Solution	85.70
30735	Hartz Canada Inc.	Hartz Ultraguard Flea & Tick Treatment for Dogs and Puppies Weighing Greater than 28 kg.	Domestic	Solution	85.70
31005	Hartz Canada Inc.	Hartz Ultraguard Plus Flea & Tick Treatment for Dogs and Puppies Weighing More than 28 kg	Domestic	Solution	85.70 ¹
31006	Hartz Canada Inc.	Hartz Ultraguard Plus Flea & Tick Treatment for Dogs and Puppies Weighing 2.5 to 6 kg	Domestic	Solution	85.70 ¹
31007	Hartz Canada Inc.	Hartz Ultraguard Plus Flea & Tick Treatment for Dogs and Puppies Weighing 6 to 14 kg	Domestic	Solution	85.70 ¹
31008	Hartz Canada Inc.	Hartz Ultraguard Plus Flea & Tick Treatment for Dogs and Puppies Weighing 14 to 28 kg	Domestic	Solution	85.70 ¹
31119	Hartz Canada Inc.	Hartz Ultraguard Plus Flea & Tick Home Spray	Domestic	Solution	0.40 ¹

Registration Number	Registrant	Product name	Marketing Class	Formulation Type	Guarantee (%)
31724	Hartz Canada Inc.	Hartz Ultraguard Rid Flea & Tick Dog Shampoo	Domestic	Solution	0.27
31749	Hartz Canada Inc.	Hartz Ultraguard Pro Flea & Tick Shampoo for Dogs	Domestic	Emulsifiable concentrate	0.27 ¹
31719	Home Hardware Stores Ltd.	Home Gardener Flying and Crawling Insect Killer	Domestic	Pressurized product	0.20 ¹
31321	Home Hardware Stores Ltd.	Home Gardener Insect Killer	Domestic	Pressurized product	0.20 ¹
31358	Home Hardware Stores Ltd.	Home Gardener Foaming Wasp and Hornet Killer	Domestic	Pressurized product	0.20 ¹
24959	K-G Spray-Pak Inc.	K-G House & Garden Insect Killer VI	Domestic	Pressurized product	0.20 ¹
24960	K-G Spray-Pak Inc.	K-G Flying Insect Killer III	Domestic	Pressurized product	0.15 ¹
29946	K-G Spray-Pak Inc.	Better than Bed Bug Killer	Domestic	Pressurized product	
30273	K-G Spray-Pak Inc.	Better than Wasp & Hornet Killer I	Domestic	Pressurized product	0.125 ¹
31370	K-G Spray-Pak Inc.	K-G Hornet & Wasp Foam (0.2% tet, 0.2% sum)	Domestic	Pressurized product	0.20 ¹
31632	K-G Spray-Pak Inc.	K-G Hornet & Wasp Spray (0.2% tet, 0.2% sum) - Nitrogen Powered	Domestic	Pressurized product	0.20 ¹
29753	K-G Spray-Pak Inc.	KG Wasp & Hornet Killer	Commercial	Pressurized product	
24825	Kuus Inc.	Knock Down Flying Insect Killer I	Domestic	Pressurized product	0.10 ¹
30034	Kuus Inc.	Knock Down Bed Bug Killer I	Domestic	Pressurized product	0.20 ¹
30084	Kuus Inc.	Protex Bed Bug Killer .20% d-Phenothrin	Domestic	Pressurized product	0.20 ¹
30085	Kuus Inc.	Knockdown Kilsol One Solution 22 in 1! MULTI INSECT KILLER	Domestic	Pressurized product	0.20 ¹
30965	Kuus Inc.	Knock Down Hornet & Wasp Blaster Spray Killer	Domestic	Pressurized product	0.125 ¹
31042	Kuus Inc.	Knock Down Professional Hornet & Wasp Blaster Spray Killer I	Domestic	Pressurized product	0.125 ¹
31409	Kuus Inc.	Knock Down Hornet & Wasp Blaster Spray Killer (0.2% tetramethrin & 0.2% d-phenothrin)	Domestic	Pressurized product	0.20 ¹
31411	Kuus Inc.	Knock Down Hornet & Wasp Foam Blaster Killer (0.2% tetramethrin & 0.2% d-phenothrin)	Domestic	Pressurized product	0.20 ¹
32092	Kuus Inc.	Knock Down Pot-It Plant & Indoor Garden Multi Insect Killer	Domestic	Pressurized product	2.00 ¹
30209	La Co-op du Québec	Eliminator Plus Wasp & Hornet Killer Insecticide I	Domestic	Pressurized product	0.125 ¹
30286	Les Marques Metro s.e.n.c.	Selection House & Home Insect Killer	Domestic	Pressurized product	0.20 ¹
29947	Les Produits de Contrôle Supérieur Inc./ Superior Control Products Inc.	PROMA XX Bed Bug Destroyer	Domestic	Pressurized product	0.20 ¹
30212	Les Produits de Contrôle Supérieur Inc./ Superior Control Products Inc.	Super Hunter Wasp & Hornet Killer Insecticide I	Domestic	Pressurized product	0.125 ¹
30302	Lloyds Laboratories	Wasp & Hornet Blaster	Domestic	Pressurized product	0.125 ¹
31618	Loblaws Brands Ltd.	Tera Gear Don't Bug Me House & Home Insect Killer	Domestic	Pressurized product	0.20 ¹

Registration Number	Registrant	Product name	Marketing Class	Formulation Type	Guarantee (%)
24818	McLaughlin Gormley & King Company	Multicide Sumithrin 90% Concentrate	Manufacturing concentrate	Solution	90.00
24819	McLaughlin Gormley & King Company	Multicide Intermediate 2084	Manufacturing concentrate	Solution	7.17 ¹
24820	McLaughlin Gormley & King Company	Multicide Intermediate 2086	Manufacturing concentrate	Solution	8.90 ¹
24829	McLaughlin Gormley & King Company	Multicide Intermediate 2317	Manufacturing concentrate	Emulsifiable concentrate	9.23 ¹
26997	McLaughlin Gormley & King Company	Multicide Intermediate 2660	Manufacturing concentrate	Solution	6.25 ¹
27384	McLaughlin Gormley & King Company	Multicide Intermediate 2734	Manufacturing concentrate	Emulsifiable concentrate	10.00 ¹
27390	McLaughlin Gormley & King Company	ETOC Concentrate 2593	Manufacturing concentrate	Emulsifiable concentrate	3.43 ¹
30074	McLaughlin Gormley & King Company	Multicide Intermediate 2791	Manufacturing concentrate	Solution	8.00 ¹
31485	McLaughlin Gormley & King Company	MGK 2987	Manufacturing concentrate	Liquid	20.00 ¹
24823	McLaughlin Gormley & King Company	Multicide Crawling Insect Killer	Domestic	Pressurized product	0.20 ¹
24824	McLaughlin Gormley & King Company	Multicide Household Insect Killer	Domestic	Pressurized product	0.20 ¹
25491	McLaughlin Gormley & King Company	NYLAR Pressurized Spray 2618	Domestic	Pressurized product	0.30 ¹
26998	McLaughlin Gormley & King Company	Multicide Wasp & Hornet Killer 2695	Domestic	Pressurized product	0.125 ¹
27385	McLaughlin Gormley & King Company	Multicide Pressurized Roach Spray 27341	Domestic	Pressurized product	0.50 ¹
27404	McLaughlin Gormley & King Company	ETOC Pressurized Spray 2594	Domestic	Pressurized product	0.12 ¹
30745	McLaughlin Gormley & King Company	Evercide Wasp & Hornet Killer 20861	Domestic	Pressurized product	0.20 ¹
31486	McLaughlin Gormley & King Company	MGK 29871	Domestic	Pressurized product	0.20 ¹
31487	McLaughlin Gormley & King Company	MGK 29872	Domestic	Pressurized product	0.20 ¹
30075	McLaughlin Gormley & King Company	Bedlam Insecticide	Commercial	Pressurized product	0.4 ¹
30287	NCH Canada Inc.	X-Pire	Domestic	Pressurized product	0.20 ¹

Registration Number	Registrant	Product name	Marketing Class	Formulation Type	Guarantee (%)
30303	Novella Brands Inc.	Blaze Wasp & Hornet Killer	Domestic	Pressurized product	0.125 ¹
30994	Novella Brands Inc.	Blaze Pro Wasp & Hornet Killer	Domestic	Pressurized product	0.125 ¹
31554	Novella Brands Inc.	Blaze Pro Bed Bug Killer Kills on Contact	Domestic	Pressurized product	0.20 ¹
31563	Novella Brands Inc.	Blaze Bed Bug Killer Kills on Contact	Domestic	Pressurized product	0.20 ¹
31572	Novella Brands Inc.	Blaze Pro Wasp and Hornet Jet Foam	Domestic	Pressurized product	0.20 ¹
31664	Novella Brands Inc.	Blaze Wasp & Hornet Jet Foam, 'Kills on Contact'	Domestic	Pressurized product	0.20 ¹
26502	Rolf C. Hagen Inc.	Sergeant's Protect Household Flea Spray	Domestic	Pressurized product	0.30 ¹
31647	Rolf C. Hagen Inc.	Sentry Household Flea Spray	Domestic	Pressurized product	0.30 ¹
25504	S.C. Johnson and Son Ltd.	Raid Flying Insect Killer 2	Domestic	Pressurized product	0.15 ¹
26932	S.C. Johnson and Son Ltd.	Raid Max House & Garden Multi-Bug Killer	Domestic	Pressurized product	0.20 ¹
29696	S.C. Johnson and Son Ltd.	Raid Max Crawling Insect Bug Killer 2	Domestic	Pressurized product	0.20 ¹
29697	S.C. Johnson and Son Ltd.	Raid Ant, Roach & Earwig Bug Killer 18	Domestic	Pressurized product	0.20 ¹
29699	S.C. Johnson and Son Ltd.	Raid Spider Blaster Bug Killer 3	Domestic	Pressurized product	0.20 ¹
29776	S.C. Johnson and Son Ltd.	Raid Wasp & Hornet Bug Killer 7	Domestic	Pressurized product	0.125 ¹
30744	S.C. Johnson and Son Ltd.	Raid Outdoor Ant Nest Destroyer 2	Domestic	Pressurized product	0.20 ¹
30746	S.C. Johnson and Son Ltd.	Raid Max Wasp & Hornet Foam Bug Killer 2	Domestic	Pressurized product	0.20 ¹
30557	Scotts Canada Ltd.	Ortho Home Defense Max, Hornet & Wasp Eliminator Spray	Domestic	Pressurized product	0.125 ¹
32136	Scotts Canada Ltd.	Ortho Bed Bug B Gon Max Bed Bug Killer	Domestic	Pressurized product	0.20 ¹
32140	Scotts Canada Ltd.	Ortho Home Defense Max Home Insect Killer	Domestic	Pressurized product	0.20 ¹
29204	Shoppers Drug Mart/Pharmaprix	Life Brand House & Home Insect Killer	Domestic	Pressurized product	0.20 ¹
28380	State Industrial Products	ZERO IN WAS Wasp & Hornet Killer	Commercial	Pressurized product	0.125 ¹
24817	Sumitomo Chemical Company, Limited	Sumithrin Technical Grade	TGAI	Solution	96.6
31484	Sumitomo Chemical Company, Limited	Momfluorothrin Flying And Crawling Insect Killer Spray	Domestic	Paste	0.20 ¹
26179	Sure-Gro IP Inc.	C-I-L Flea Killer Surface Spray	Domestic	Pressurized product	0.30 ¹
29423	Sure-Gro IP Inc.	Schultz Houseplant Insect Spray	Domestic	Pressurized product	0.20 ¹
29426	Sure-Gro IP Inc.	Wilson Oneshot House and Indoor Garden Insect Killer	Domestic	Pressurized product	0.20 ¹
29555	Sure-Gro IP Inc.	C-I-L House and Indoor Garden Insect Killer	Domestic	Pressurized product	0.20 ¹
30158	Sure-Gro IP Inc.	Wilson One Shot Bed Bug Killer	Domestic	Pressurized product	0.20 ¹
30191	Sure-Gro IP Inc.	C-I-L Wasp & Hornet Long Shot	Domestic	Pressurized product	0.125 ¹
30192	Sure-Gro IP Inc.	Wilson Oneshot Wasp & Hornet Long Shot	Domestic	Pressurized product	0.125 ¹
31128	Sure-Gro IP Inc.	Wilson Long Shot Wasp & Hornet Killer	Domestic	Pressurized product	0.125 ¹
30432	Sure-Gro IP Inc.	Green Earth Homecare Flying & Crawling Insect Killer (1)	Domestic	Pressurized product	0.20 ¹
31667	Sure-Gro IP Inc.	Green Earth Homecare Bed Bug Travel Spray (1)	Domestic	Pressurized product	0.20 ¹

Registration Number	Registrant	Product name	Marketing Class	Formulation Type	Guarantee (%)
31899	Sure-Gro IP Inc.	Wilson One Shot Jet Foam Hornet & Wasp Killer	Domestic	Pressurized product	0.20 ¹
31950	Surekiller Products Ltd.	Surekiller Bed Bug Killer	Domestic	Pressurized product	0.20 ¹
31951	Surekiller Products Ltd.	Surekiller Flying & Crawling Insect Killer	Domestic	Pressurized product	0.20 ¹
31953	Surekiller Products Ltd.	Surekiller Outdoor Mosquito & Fly Killer	Domestic	Pressurized product	0.20 ¹
31954	Surekiller Products Ltd.	Surekiller House Plant Insect Killer	Domestic	Pressurized product	0.20 ¹
31225	UR-CAN Inc.	Onguard Bedbug, Crawling & Flying Insect Killer	Domestic	Pressurized product	0.20 ¹
31515	UR-CAN Inc.	on guard bed bug killer	Domestic	Pressurized product	0.20 ¹
31883	UR-CAN Inc.	Onguard Hornet & Wasp Blaster	Domestic	Pressurized product	0.125 ¹
31884	UR-CAN Inc.	Onguard Hornet & Wasp Foaming Spray	Domestic	Pressurized product	0.20 ¹
28841	Wal-Mart Canada Inc.	Great Value House And Home Insect Killer	Domestic	Pressurized product	0.20 ¹
31551	Wal-Mart Canada Inc.	Great Value Bed Bug Killer	Domestic	Pressurized product	0.20 ¹
31568	Wal-Mart Canada Inc.	Great Value Wasp & Hornet Insect Killer	Domestic	Pressurized product	0.125 ¹
30879	Woodstream Canada Corporation	Terro Wasp & Hornet Killer	Domestic	Pressurized product	0.125 ¹

¹ Co-formulated with other active ingredient(s), which are not listed in the table.